

REMARKS/ARGUMENTS

This case has been carefully reviewed in light of Office Action dated November 24, 2003. In the Office Action, claims 1-17 were rejected under 35 USC 101. Claims 18-28 were withdrawn from consideration. Claims 1-17 have been amended. No new matter has been added. Claims 1-28 remain pending in this application.

Claims 1 and 10 recite steps relating a computer readable medium having computer instructions to generating an image using a mathematical model. The mathematical model uses basis objects defined by a mathematical function and having a spatial relationship to all of the other basis objects. The basis objects and the spatial relationships between the basis objects define a three-dimensional (3-D) geometry of the model. The model is capable of being transformed by one or more transformation operators which are associated with a predetermined transformation operation. When one of the transformation operators operates on one of the basis objects, the spatial relationship between the basis object that is operated on and at least one other basis object is varied, thus causing the geometry of the model to be varied.

The rejection of claims 1-14 under 35 U.S.C. §101 is respectfully traversed and Applicant submits the claims recite statutory subject matter. The Examiner suggested that the claim language of independent claims 1 and 10 is directed to mathematical model and does not fall into any one of the statutory categories. Especially as amended, Applicant submits that the claimed invention does recite statutory subject matter, a computer readable medium for storing computer instruction to generate an image using a mathematical model.

Section 101 provides that "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title." Only inventions directed to abstract ideas, laws of nature, and natural phenomena are generally considered outside the four statutory categories of invention. Thus, for this inquiry, Applicant submits that a claimed invention contains patentable subject matter if it falls within at least one of the four enumerated categories and does not classify into one of the judicially created exceptions to statutory subject matter.

In the present patent application, independent claims 1 and 10 fall within the process and articles categories under section 101 because these claims recite a method and computer readable medium respectively, for storing computer instruction to generate an image using a mathematical model. The mathematical model comprises basis objects defined by a mathematical function and having a spatial relationship to all of the other basis objects, which in turn define a three-dimensional (3-D) geometry of the model. The model is capable of being transformed by one or more transformation operators, which are associated with a predetermined transformation operation. Such a method for generating an image does not relate to laws of nature and natural phenomena.

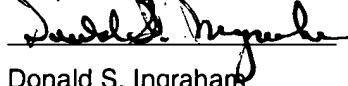
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Reply to Office action of November 24, 2003

Applicant submits that generating an image using a mathematical model constitutes a statutory process because it manipulates appropriate subject matter to achieve a practical application - the generated image is applied in medical systems. Further the mathematical model can be used to generate an image of the head and thorax region.

As independent claims 1 and 10 produce a practical application – the generation of an image using a mathematical model, is used in medical applications. Applicant submits that these claims constitute a statutory process. Also, Applicant submits that claims 2-9 and 11-17, which depend directly or indirectly from claims 1 and 10, respectively, recite statutory subject matter.

Accordingly, Applicant requests that the Examiner reconsider and remove the rejection under 35 U.S.C. § 101. In view of the above, it is submitted that the claims are patentable and in condition for allowance. Reconsideration of the rejection is requested. Allowance of claims at an early date is solicited.

Respectfully submitted,



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